

CLAIMS

1. An active matrix liquid crystal display device having in a display area an array of picture elements operable to produce a display image, each picture element comprising a picture element electrode which together with an opposing, common, electrode defines a liquid crystal display element, and a storage capacitor connected to the picture element electrode, the device including adjustment means for adjusting drive signals applied to the picture elements in accordance with changes in the liquid crystal capacitance wherein the adjustment means comprises an oscillator circuit which is coupled to a plurality of picture elements in the array and whose frequency of oscillation provides a measure of a capacitance associated with the plurality of picture elements and dependent on the capacitance of their respective liquid crystal display elements.

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2. A device according to Claim 1, wherein respective first electrodes of the storage capacitors of the plurality of picture elements are connected together and wherein the adjustment means is arranged to measure the capacitance of the connected first electrodes of the storage capacitors.

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3. A device according to Claim 1 or 2, wherein the storage capacitors are connected between their respective picture element electrodes and a connection line common to the storage capacitors of the plurality of picture elements and wherein the adjustment means is arranged to measure the capacitance associated with the connection line.

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4. A device according to Claim 3, wherein the storage capacitor connection line is connected to switch means that is selectively operable to couple the connection line to a source of predetermined potential or to the oscillator circuit to enable the adjustment means to perform a measuring operation.

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5. A device according to Claim 1, wherein the adjustment means is arranged to measure the capacitance of the common electrode.

5 6. A device according to Claim 5, wherein the common electrode is connected to switch means that is selectively operable to couple the common electrode to a source of predetermined potential or to the oscillator circuit to enable the adjustment means to perform a measuring operation.

10 7. A device according to any one of the preceding claims, wherein the oscillator circuit of the adjustment means is coupled to all the picture elements in the array with the measurement provided thereby being dependent on a capacitance associated with the display elements of all the picture elements in the array.

15 8. A device according to any one of the preceding claims, wherein the oscillator circuit of the adjustment means comprises thin film circuitry integrated on a substrate of the device which carries the picture element electrodes.

20 9. A device according to any one of the preceding claims, wherein an input of the oscillator circuit of the adjustment means is coupled to the plurality of picture elements via a coupling circuit comprising a capacitor.